

# news **VI**

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

## BI-MONTHLY **REPORT**

Fred Maia, W5YI, Editor, P.O. Box 10101, Dallas, TX 75207

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## 1987 - The year in Review

Every year about this time we pause to reflect on the major amateur radio and telecommunications happenings of the past twelve months. Technology, like time, never stands still. It is always in a state of change. We have just ended our ninth year of publishing THE W5YI REPORT. We start our tenth year with the next issue. There was good ...and bad amateur radio news during 1987.

(1.) The biggest ham radio story of 1987 was the FCC approval for entry level amateur radio operators to operate in the voice mode. Up until March 21, 1987, Novices were restricted to Morse code operation. Now they could talk around the world using sideband in the ten meter band, through 220-MHz FM repeaters or link their computers via packet radio.

(2.) Not only did beginners benefit from Novice Enhancement, but the Technician Class, the next step up the ham radio ladder, did as well. The FCC split the Element 3 questions in half with the questions relating to VHF operation going to Element 3(A). Novices now only had to pass an additional 25 question examination to reach the Technician level. The remaining Element 3 questions became the 3(B) pool - a requirement for the General Class.

(3.) The Novice and Technician ranks grew

at record proportions. The period April through October 1987 (the latest month for which we have figures) saw a 28.3% increase in the number of Novice operators entering amateur radio. (16,304 applicants joined the Novice ranks ...versus 12,708 during the same period in 1986.)

All of the increase in the total number of ham radio operators was accounted for by expansion at the Novice and Technician level. The total amateur census increased 9,119 during fiscal year 1987. (The number of Novice and Technician operators increased by 9,157.) Fewer Novices dropped out of amateur radio than ever before. While the total amateur census increased 2.7% overall during fiscal year 1987, the total number of Novice and Technician operators swelled by 6.1%. Clearly Novice Enhancement was working!

(4.) In February, the FCC proposed to resolve the long standing question of what to do about permanently allocating the 220-MHz band. Amateurs had been using the spectrum on a temporary basis since WARC-79. The Commission proposed to let the amateurs keep 222 to 225 MHz with 220-222 MHz going to the Land Mobile Service. The amateur community was not happy with this decision and organized an effort to retain the entire band. Thousands of comments opposing Docket 87-14 poured into the FCC.

(5.) For the first time (in February and March) VEC's determined and agreed on new pool questions and multiple choice answers for the new expanded Novice Class examination. VEC's also decided how Element 3 should be separated into 3(A) and 3(B). Previously the FCC maintained all amateur radio operator question pools. VEC's even printed the new Form 610 applications since the FCC's previous version was not suitable for the Novice Class which now required two VE's rather than one.

(6.) IBM introduced a new generation of PC's in April. Before the year was over, they would ship a million of their PS/2 microcomputers which supposedly couldn't be "cloned."

(7.) PRB-3, which looked toward privatizing the issuance of amateur radio call signs of choice, became a hot issue during the year. Many entities applied to be the SCSC (Special Call Sign Coordinator). A ruling is expected shortly.

(8.) The FCC declined to establish a Consumer Radio Service (CRS) in April. CRS was to have replaced the 8-pair General Mobile Radio Service (GMRS).

(9.) Airwave indecency became a big issue in May with the FCC issuing new guidelines on what was to be considered indecent. The new definitions applied to broadcasters as well as amateur radio operators. Generally the new definition held words depicting sexual and excretory activities or organs to be indecent and prohibited.

(10.) A new Novice Voice Class package (written by yours truly and Gordon West/-WB6NOA) was published by Tandy in August and promoted in their 1988 Radio Shack catalog.

(11.) VEC's at the (Atlanta) Conference of VEC's voted to revise amateur radio question pools every three years rather than annually as was previously the case. A new Extra Class pool will go into effect on November 1, 1988, followed by newly revised Novice/Technician pools on November 1, 1989 and General/Advanced: November 1, 1990. These new question pools will be released to the public

some eight to nine months before use in testing.

(12.) It appeared in August that the ground-work had been laid for reciprocal ham licensing between Mexico and the United States when a hemisphere wide amateur operating arrangement was adopted. The reciprocal licensing arrangements are not yet in effect.

(13.) A NPRM was issued in October providing for unlicensed §Part 15 operation of low powered devices by the public. Amateurs opposed this measure as being a potential interference source.

(14.) In October, due to widespread VE/VEC testing "irregularities" in Puerto Rico, the FCC ordered all Region 12 volunteer examiners separated from the VEC testing system. VEC's were directed to re-accredit only those amateurs whose integrity was beyond question by the VEC-.

## SAN DIEGO HAM JAMMER PLEADS GUILTY

The December 1, 1987, San Diego Union newspaper reports that perennial offender Jerry Edward Gastil, K6DYD, of nearby Ocean Beach, has pleaded guilty to wilfully interfering with FBI radio transmissions. He was monitored by FBI technicians and FCC engineers playing 1960's music on the evening of April 10th on FBI tactical channels. The interference, which persisted between April 1 and 10, required considerable knowledge of radio communications.

According to Asst. U. S. Attorney Patrick Coughlin, Gastil entered his guilty plea to one of eight counts on November 25th before U. S. District Judge Earl B. Gilliam. Gastil is employed by an Escondido radio communications company as a technician.

Gastil, who will be sentenced January 25th, faces a maximum 10 years in prison and a fine of \$250,000. Gastil was fined \$750 for operating a pirate broadcast station on 7434 kHz in early 1986 using the alias "Doctor Demento" while on the air as the "Voice of the Pacific Southwest" with the unauthorized call sign: KIWL. He was also fined \$50 on July 5, 1985, for operating a repeater station in San Diego without proper identification.

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## LAMONICA - OPERATING ON THE FRINGE

Keith E. Lamonica, W7DXX, (Murray, Utah) who headed up the backyard dish broadcast operation known as FM America has re-surfaced. Lamonica started FM America in 1985 during the stormy days when satellite programming and the TVRO industry was in transition.

FM America was actually formed to offer a request commercial music service that could be sold to AM and FM radio stations across the country. Lamonica, who had a background in broadcast station consulting, and his wife started the business from an apartment in Salt Lake City with money supposedly raised by selling and pawning everything he had. FM America turned into private talk radio when people started asking him about satellite systems.

Home satellite receiving stations were selling by the thousands at the time to individuals who were able to receive quality (and some not so quality) programming at no cost. Backyard dishes appealed to those in rural areas where cable was not (and probably never would be) available and those who wanted free programming. One by one, however, programmers began scrambling their signals. This became the primary subject FM America listeners discussed. The commercial music service degenerated to full time anti-establishment radio.

Owners of satellite uplink/downlink operations are considered common carriers - not broadcasters. While satellite teleport operators must be licensed by the FCC - those communicating through the satellite are simply "private users". The situation is not unlike talking on the telephone. The phone companies must be licensed - the public need not be.

Satellite transponders have audio sub-carriers and Lamonica leased one for his FM America audio programming. There are many other similar services. Backyard dish owners all over the U.S. got his "broadcasts" simply by tuning into the subcarrier. Lamonica even uplinked amateur communications for receipt by hams owning backyard dishes all over the country. Amateurs found they could really

extend their communications going through a commercial satellite. Legally, they were operating on the fringe of lawfulness via a phone patch.

Lamonica moved from the apartment to a rented house in Murray, Utah, across the street from the satellite uplink facility in late 1985. An advanced class ham operator from California called in to FM America one evening and suggested he sell memberships in his organization. From that point on, FM America existed on \$20.00 membership dues per year and donations. Lamonica mentioned on the air that he had anywhere from 40 to 50,000 members. While this is probably exaggerated, he did have thousands of "members."

He fell into disfavor with his members last year when he started stretching the truth and acting erratic. He said he had flown missions in Vietnam for the Air Force but the details were false; he had on-the-air contests - but never awarded the promised prizes ...a July 4th Dallas picnic was never held and few of the hundreds who paid \$25 for reservations ever got their money refunded.

Satellite dealers became concerned that FM America was adversely affecting the industry by misleading listeners about TVRO related legislation. They were particularly annoyed at his testimony before a Washington Congressional subcommittee looking into satellite scrambling. Lamonica ignored warnings from a satellite industry group that he act responsibly or cease operations. They didn't approve of his antics, his supposed satellite industry representation from a subcarrier of a porno channel and his reported harboring of "pirates" - who were selling and promoting of illegal chips and decoder boxes. His previous police record in several states was uncovered shortly thereafter.

Anyone who challenged or did not agree with Lamonica became an object of on-air ridicule. He said they were "planted" by opposition satellite radio stations - North America One or KSAT radio. Underground organizations opposing FM America sprouted up and put out various newsletters - many of them mailed to us since he dealt largely with

ham radio operators. One was called "The October Squad." Although we do not have a backyard dish, we started looking into his activities since ham radio operators and operations were largely involved. What we found is almost like a fairy tale.

FM America became a public company in an unusual way ...through a "reverse" merger with an existing public company called KMA (for believe it or not, Kiss My A—) International. KMA is a corporate shell of penny stocks in Salt Lake City. He hooked up with them when a KMA owned 24-hour competing radio station operating on the same transponder as FM America was not able to make a go of it. Lamonica supposedly bought out the company. Since it was a merger, no prospectus had to be issued. FM-America quickly became a public company without going through regular SEC procedures.

On July 11, 1986, Lamonica had a well-known Chicago psychic stock adviser on his program who gave an excellent "reading" on FM America stock. KMA climbed from 10¢ to \$1.75 in less than two weeks! A \$10,000 investment became \$175,000 ...practically overnight. We are talking big bucks! There was 100 million shares of stock outstanding.

The SEC is now interested in who sold shares at a huge profit. They are also very interested in the fact that the broker's father formed KMA International. The state of Utah suspended the stock earlier this year for failure to file required registration and financial papers.

Eventually FM America came crashing down due to bad check payments for satellite time. He was unceremoniously tossed off the air two months ago when the satellite transponder owner ordered the uplink facility to cut off FM America.

Before this happened, however, a Myrtle Beach ham operator (Malcolm "Mike" Holt-W4DCD) told Lamonica on his FM America over-the-air call-in line about an AM radio station (WMBY in Myrtle Beach, S.C.) that went out of business. Seeing an opportunity to get back in business, Lamonica closed up shop in late October and headed east.

Mike Holt, who has been a ham more than 30 years, had an interest in acquiring AM broadcast station WMBY in Myrtle Beach and told Lamonica so. The station had been off the air since March. Holt knew that the owners had gone out of business and felt that whoever applied for it would get it. He also knew Keith needed an outlet for his "new generation" programming. Lamonica said he would run the situation "through his computer bank" and see what it looks like. Lamonica completed the application for the station and sent it in to the FCC.

In a few days - late October when FM America was running their "farewell" tapes - Holt received a phone call from Lamonica telling him that "we now have a radio station." Holt wanted to know about the "we" business; he thought the AM station would be registered in his name. Lamonica told him that he couldn't afford it, "I bought it and I'll give you half of it."

It was agreed that Holt, a broadcast engineer by trade who initially had worked on getting WMBY on the air, would once again get the station ready for broadcasting in exchange for his half interest. Mike had the station ready to go on the air in about three weeks. Holt called back to Utah and asked Keith what was next. Lamonica told him that he would come to Myrtle Beach and that his 30% share would really amount to a lot of money for him. It dawned on Mike that all was not going well for him.

Mike was asked by Lamonica to do some test programming to be sure that everything was operating properly. At that point, Holt called the FCC in Atlanta to be certain that everything was in order. He was directed not to put the AM station on the air since the broadcast station license had been terminated. Lamonica arrived in Myrtle Beach on November 19th. Mike was informed about his now 10% interest in the venture.

The next day, Lamonica had WMBY - now operating as WKEL (for W Keith Ernest Lamonica) - on the air. There seems to be some question as to whether the broadcasting was legal or not due to the clouded ownership of the station. Due to non-payment of taxes,

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under "The W5VI Report" Program? If so, please send a copy of your Extra Class license, uns signed statement, and a SASE

"I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or operator license revoked or suspended. I do not own a significant

the State of South Carolina liquidated the broadcast corporation ten days before Lamonica applied for a change of call letters. Theoretically, there was no legal owner to sell the station to Lamonica who reportedly purchased the station with the now renamed FM America International stock and personal notes.

WKEL has been on and off the air for a month now running tapes and music. A satellite dish has been installed on the station roof and WKEL is broadcasting signals imported from Canadian broadcast station CIRK, Edmonton, Alberta, taken off a satellite sub-carrier. It is being done with their permission and the Canadian station is announcing over the air that they are being carried in the United States by "the big WKEL, 50,000 watts in Myrtle Beach, South Carolina."

The FCC denied the first station application for WKEL as being "patently defective" since it was submitted on the wrong form and without a filing fee. We understand that a second application (filed November 30) now has also been rejected.

Keith Lamonica is looking towards purchasing a home in Myrtle Beach from a doctor who is also a ham - and buying an expensive airplane from another ham. Mike Holt is trying to collect a bill for putting WKEL in operating shape. (To be continued next issue.)

● An important Executive Committee meeting of the Region 2 - International Amateur Radio Union was held recently in Barbados. The Committee had a full agenda and covered such topics as the rapid growth of packet radio, band planning, financial matters, and the need to be properly prepared for future WARC conferences. It was decided that the Tenth General Assembly of the IARU will be held in Orlando, Florida, in October of 1989. A Caribbean IARU Regional Meeting is planned for February 1988.

● **Late Bulletin:** We understand that Ralph Haller, N4RH, previously the FCC's Deputy Chief, Private Radio Bureau, has been promoted to: Chief, PRB. Haller thus becomes the highest ranking FCC official who is also a ham radio operator. No details are available at press time.

## AMATEUR RADIO CALL SIGNS....

issued as of the first of December.

Radio District:	Gp."A" Extra	Gp."B" Adv.	Gp."C" Tech/Gen.	Gp."D" Novice
0	WD0D	KE0RU	N0IRR	KB0BKL
1	NN1Y	KC1HD	N1FIM	KA1RFI
2	WC2A	KE2DI	N2HSP	KB2EOL
3	NM3I	KD3FM	N3FWN	KA3SIM
4 (*)	AB4EU	KK4TT	N4ROU	KC4CJN
5 (*)	AA5DU	KG5FT	N5LTK	KB5ETD
6 (*)	AA6FP	KJ6BI	N6QXU	KB6UVZ
7	WI7A	KF7FH	N7KDE	KB7DFM
8	NZ8K	KE8OU	N8IYQ	KB8DJJ
9	NV9Q	KE9HG	N9HAR	KA9ZQD
N.Mariana I.	AH0E	AH0AD	KH0AJ	WH0AAH
Guam	KH2G	AH2BU	KH2DD	WH2ALG
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra/Jarvis	AH5A			
Hawaii	(**)	AH6IP	NH6NZ	WH6BVM
Kure Island			KH7AA	
Amer. Samoa	AH8C	AH8AD	KH8AE	WH8AAW
Wake Wilkes Peale		AH9AC	KH9AD	WH9AAH
Alaska	(**)	AL7JK	NL7LQ	WL7BPX
Virgin Is.	KP2T	KP2BK	NP2CG	WP2AFU
Puerto Rico	(**)	KP4ON	WP4NA	WP4HSC

**NOTES:** \* = All 2-by-1 format call signs have been assigned in the 4th, 5th and 6th radio districts. 2-by-2 format call signs from the AA-AL prefix block now being assigned to Extra Class amateurs.

\*\* = All Group "A" (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) format call signs now being assigned Extra Class.

● Canadian amateurs are eagerly awaiting the new regulations on the Restructuring of the Amateur Radio Service. The Department of Communications is reluctant to give a date for its release. The new rules will be accompanied by a Regulatory Impact Analysis Statement. If there is no or little comment, the new Canadian amateur radio rules will become effective after allowing some months for amateurs and others to adjust to the changes. The likelihood is that Canada will adopt a new entry level Certificate "B" all-mode "Basic Amateur" radio license without a requirement for Morse code. A written test will be required, however, to operate on all amateur frequencies above 30 MHz.

December 15, 1987

## 1987 TECHNOLOGY REPORT ...AND BEYOND

- Desktop publishing which did not even exist a couple of years ago is now a billion dollar business. Laser printers were the hottest selling computer product of 1987. Five years ago a laser printer cost \$10,000. Now prices have dipped to the \$1,200 range. Cannon has 85% of the market, but Ricoh is about to change all that now that Tandy (Radio Shack), Texas Instruments, Epson and IBM are using their engines. Daisy-wheel printers are quickly becoming antiques! Laser printers that print in color are expected shortly ...as are laser printers with higher resolution than 300 dpi (dots-per-inch.).

- Fax Machines have now become a consumer product - much in the same fashion as personal copiers. 300,000 facsimile machines were sold through consumer outlets in 1987 - about double last year. Images can instantly be sent in 20 seconds. An average unit now costs \$1,750, but prices of fax units are falling. Expect \$500 units within two years. And fax machines can easily double as copiers and telephones. Better hotels are offering business guests Fax machine equipped rooms!

- JT Fax is a brand new low-priced (\$395) internal facsimile board for a PC that lets you transmit files and graphic data directly to a Fax machine on the other end of the telephone. It also can accept and store Fax transmissions for later printing on a conventional printer.

- Sales of Camcorders and other personal video accessories were strong in 1987. Video editing controllers (made by Quasar, Panasonic, ...Sony) have taken off! They allow editing and graphics capability - such as adding titles - to creative home video. Video editors cost \$200-\$500.

- Expensive high-tech telephones with all sorts of features sold big in 1987. It is getting harder to buy a simple inexpensive push-button call-and-ring telephone. Phones with TAD (telephone answering devices) were popular. Cordless phones have made a startling comeback!

- Disposable cameras aimed at the tour-

ist trade are just now entering the marketplace. Fujicolor has "QuickSnap" (\$9.95) and Kodak has their "Swing-110" at \$6.95. They could be a fad - but then, so were VCR's and Walkman's in 1980. (More than 13 million VCR's were sold this year and about twice that number of personal portable stereos.)

- The camera of the future, however, won't use film! Japan's Casio has just dropped the cost of its VS-101 Electronic Color Still Camera to \$900. Images are stored on 280,000 pixel 2-in floppy disks for later viewing on home television sets. Minolta has a \$1,400 electronic optional back attachment for existing SLR cameras. Sony and Konica have electronic cameras in the \$3,000 category.

- Home shopping services had another good year, but the novelty has worn off. You will be able to buy products via "the tube" you never dreamed possible. HSN (Home Shopping Network) has just bought a Dallas brokerage and financial planning firm and a seat on the New York Stock Exchange! While we don't know how they will implement the service, another purchase (a software development company named Precision Software specializing in financial services for TV viewers) leads one to think that viewers might be using home computers to make financial decisions. HSN sales were up 363% in 1987 to nearly \$600 million! They also have bought a pharmaceutical distribution company and obviously they will be peddling drugs. According to market research, only 15% of the nation's cable consumers are home shoppers - so there is still plenty of room for growth.

- It will be easier than ever to spend money! Interactive TV ordering of merchandise from video catalogs is being test marketed now. Consumer-controlled TV shopping of specific stores is on the way! Using a touch-tone telephone, a viewer simply dials a store number and enters a department/product code listed on a video menu. The product line wanted is scanned. The viewer can even zoom in for closeups and front/side/back views. You simply key in the product number, color code and size to buy it. It is not necessary to enter your credit card number since the computer knows who you are and already has it stored. Sears, J.C. Penney, Neiman-Marcus,

Ticketron and others have already signed up.

- Coca-Cola Telecommunications has announced plans to syndicate a new home shopping show called TV Value Mart. Its gimmick is that it will showcase name brand products at guaranteed lowest prices with a 30-day unlimited return privilege. The program will run seven days a week for three hours from midnight to 3:00 a.m. Products offered will be comparison shopped before airing. Service will refund the difference if a shopper finds a lower price.

- Instantaneous package tracing is now possible when you ship by Federal Express, Emery Air Freight, United Parcel and others using Digital Package Scanners. The driver simply runs a hand-held scanner over a bar-coded Bill-of-Laden when a package is picked up. The scanner is stored in a cradle in the delivery/pickup vehicle which transmits the data to a central office between stops.

- The growing use of RF-hold Pulse Radar units by police has led to the development of a new Whistler-brand radar detector. The \$289 detector has a special receiving circuit that can detect the transmission pattern of new instant-on radar signals. RF-hold allows police to have the radar unit on, but not emitting a receivable radar signal. A push-button nails you. Previously drivers could not detect between momentary false signals and instant-on radar. Whistler has patented a circuit which can tell the difference. A flashing "P" and a unique whining sound indicates the presence of pulse radar ...effectively alerting the driver. (Unless you happen to be first in line.)

- Money making idea! Some electronic stores and rental firms are renting \$300 Escort radar detectors by the day or week-end! One New York company charges \$25 per day - \$40 for the weekend. (Seems high to us!) Renters are given full credit if they decide to buy the detector.

- A female lobbyist for Michigan radar detector makers was charged with attempted bribery when she offered a state senator a \$2,500 campaign contribution in exchange for his support in killing a radar detector ban

that was tacked onto Michigan legislation raising the proposed speed limit to 65 mph. Both houses finally agreed to drop the radar detector rider. The bill originally called for a \$1,000 fine and/or a 90-day jail sentence for using a radar detector.

- Did you know there are more than 240 companies publishing 6,200 "Yellow Page" directories. They even have their own trade group called the American Association of Yellow Pages Publishers. Anybody with a printing press can print the Yellow Pages since it isn't copyrighted. It is a \$7 billion plus advertising revenue market - bigger than all magazine and radio advertising put together! Nine million businesses advertise in the Yellow Pages. Now another group has sprung up! The Electronic Yellow Pages and Information Association. They intend to keep the Bell System out of the video/audio/computerized version of the Yellow Pages.

- One such service is the Talking Yellow Pages, an off-shoot of the computerized voice-mail business. You access the service by touch-tone dialling a number - followed by the category number ...such as Emergency Plumbing. It is different from ordinary Yellow Pages in that you can leave an order on the system - or be referred to an operator. The voice system plays back 15-second spots from plumbers in your area stored on a hard disk. Simple codes allow you to fast forward, back-up, stop or replay a specific ad. The system can handle 4,000 calls a day and keeps a log of all incoming calls made. A complete print-out (and orders) are dispatched to each advertiser daily. Big companies (such as Reuben H. Donnelly who publish many Yellow Page directories) are testing the new technology.

- Not unlike the telephone companies who publish Yellow Pages, the U.S. Postal Service now sees an opportunity to increase their revenue in a different field. The Postal Service plans to lease post office rooftops as cellular antenna sites around the country. They feel they can offer many advantages to cellular common carriers in that they can lease multiple locations eliminating the need for carriers to locate and negotiate several leases. It is an ideal situation for the USPS in that rural areas need fewer cellular antenna

## WHO WAS THAT MASKED MAN?

Another case of overwhelming a transmitted TV signal took place Sunday night, November 22 when a video pirate wearing a "Max Headroom" mask broke into the local feed signals of Chicago TV superstation WGN-TV and non-commercial WTTW-TV.

It was the third major incident of TV signal piracy. The first was the "Captain Midnight" episode in April 1986 when ham operator, John MacDougall, broke into the HBO satellite signal to protest satellite program scrambling. The Playboy Channel signal was interrupted in September by a religious message. ABC's, The Max Headroom Show was recently cancelled and the November 22nd incident might be another viewer protest.

The Max Headroom impersonator broke into WGN-TV's 9 p.m. newscast for about 25 seconds. The second incident was more spectacular. Max pulled down his trousers and with bare buttocks, mooned TV viewers - not really the sort of thing you'd expect on public television!

The FCC is aware of the TV signal interruption and is actively investigating the incident and searching for suspects. They speculate that the people responsible for overwhelming the TV signals would have to have a high level of know-how and extremely high powered equipment.

Viewers thought that the Max Headroom signal pirate had struck again when Chicago WMAQ-TV sportscaster Mark Giangreco inserted some images on their telecasts as a joke. WMAQ's general manager, Richard Lobo, didn't think it was funny, however, and reprimanded Giangreco for the incident. WMAQ's engineers were close to turning the station off the air!

If caught, the Max Headroom impersonator faces a year in prison and a \$10,000 fine.

Well known amateur and consulting engineer, George Jacobs, W3ASK, has filed comments with the FCC protesting the FCC's intention to allow non-licensed operation of

RF devices in the shortwave bands. (Gen. Docket 87-389)

He maintains that the Radio Regulations of the ITU recommends a 27-dB signal to interference protection ratio for the hf broadcasting service. "To achieve this level of protection against the the proposed 30 uV/m §Part 15 limiting signal, the broadcast signal strength must exceed 672 uV/m. For the great majority of hf broadcast stations beaming towards the United States, received signal levels are in the range 150 to 500 uV/m." Jacobs contends that the FCC's proposal could pose a serious threat to the reception of shortwave broadcasting.

In addition, Jacobs says even a more serious threat exists to the Amateur Radio Service where signal levels rarely exceed 100 uV/m. He asks that §Part 15 devices be denied use of the hf bands.

He further requests that a warning label be adhered to all §Part 15 devices advising the public that:

**"WARNING:** This device subject to §Part 15 of the FCC Rules and Regulations may cause interference to an authorized radio service. It shall be the responsibility of the owner or operator of the device to eliminate such interference and to furnish the Commission or its representatives information as may be requested. The Commission may require the operation of this device be terminated if the interference cannot be eliminated."

● The American Radio Relay League and ten other parties have asked for comment period extensions on Docket 87-389. The comment period regarding Operation of rf devices without an individual license has now been extended from December 4 to March 7, 1988.

● In other §Part 15 news, the FCC has amended its rules to allow the indefinite manufacture of cordless telephones operating at 46/49 MHz. In 1984, the FCC made ten pairs of frequencies in the 46 and 49 MHz bands available for a five year period for cordless telephones and said it would consider alternative spectrum options. The FCC also denied an Electronic Industries Association request for 4 megahertz in the 800/900 MHz band.

● It is customary when the sunspots begin to return to try and estimate just how strong the next solar cycle (Sunspot Cycle 22) will be. There are three accepted prediction methods. (1.) Involves looking at the activity of the earth's magnetic field at the end of the previous cycle ...another (2.) examines the beginning of the new cycle ...a (3rd.) prediction method analyzes previous cycles over a long period of time. Method 1: yields an average solar flux of 160, Method 2: 180 and Method 3: in the low 140's. While it is really too early to predict just how well DX signals will propagate, the new sunspot cycle will surely be "average to above average" in strength ...not as strong as Cycle 19 (1957/58) - the best on record. The main thing to remember, however, is that average values are just that - averages. There will be super openings to all parts of the world on a regular basis in a year or so. The peak will come between 1989 and 1991 when 10 and even 6 meters will be open to everywhere! Novices will excitingly be chatting with Australia! Ham radio should enjoy a big resurgence!

● Lockheed E.R.C. Amateur Radio Club has large red/white/blue 1988 Amateur Radio Wall Calendars. We usually order a couple every year at this time. Cost: \$5.00 each postpaid to U.S./Canada/Mexico. (W6LS, 2814 Empire Avenue, Burbank, CA 91504)

Ron's goal was to have a completely separate, self-governing organization for Canadian amateurs. Up until the late 1970's, Canada had been represented in amateur affairs as a division of the American Radio Relay League.

"With much regret, and unfortunately, much disillusionment with the present ARRL leadership, not to mention the supposed bilateral principles of the ARRL, I have no other alternative than to herewith submit my resignation, as CRRL-President effective immediately. The many critics of the League operations in Canada, who have long alleged the policies of the Canadian Division were led or otherwise dictated by those outside our country were, I am forced to conclude, to no small degree were correct," he wrote.

He leaves his wife, Ellen, and a family in New Brunswick. Born Ronald John Harold Hesler, Ron is why the Canadian Radio Relay League - now completely separated from the ARRL - exists today. He will be badly missed.

December 15, 1987

## FCC RULES ON A/B TV SWITCH ISOLATION

More than a year ago the FCC ruled that, starting in 1991, cable operators would no longer be required to carry all local over-the-air TV programming. The controversial ruling was in answer to a 1985 federal court decision holding unconstitutional the requirement that cable systems must carry every local television station on their cable lineup. The suit was initiated by Ted Turner who argued that cable operators frequently could not carry wanted programming because they were forced to carry all local broadcast TV programming. The matter became known as the "must carry" issue from that point on.

"Must carry" became a very hot item in broadcast circles. Television stations were fiercely opposed to the ruling since it meant viewers would have to install some sort of external antenna to receive their signals. They feared that cable programming would be so deeply entrenched at that point that few would bother and their audience (and with it, advertising revenue) would be adversely affected.

The FCC's answer to the dilemma was to require cable operators to provide so-called external "A/B switches" at no cost to the viewing public so they could switch between broadcast and wireline programming. While new television receivers could incorporate broadcast/cable switching, it was not required. Now both cable operators and broadcasters were unhappy. Several Petitions for Reconsideration were filed.

On November 20, 1987, the FCC released a final Report and Order on the matter of input selector switches. They let stand their previous rules but required all A/B switches to provide at least 80 db of isolation in the frequency range 54-216 MHz and 60 db of isolation between 216 and 550 MHz. Initially the Commission had proposed only 60 db isolation standards.

Most of the commenters opposed the 60 db isolation standard proposed and urged adoption of more stringent measures. Some feared a leakage from the cable system through the outside television antenna that

had the potential to disrupt aeronautical communications and radio navigation systems.

Alarmed that cable subscribers would be caused interference by amateur VHF/UHF operators whose signals penetrate poorly designed external switches, the ARRL asked for no less than 90 db of isolation between the cable input connection and the antenna input. The new technical standards require increased resistance to amateur 2-meter and 220-MHz transmissions.

The new rules also subject A/B switch makers to the FCC's self-testing verification procedures. The Commission has published an isolation test procedure that manufacturers must use to measure cable television switch performance.

The FCC also required cable operators to warn the public against direct coupling of cable signals to TV antenna terminals without using the approved shielded A/B switches. Cable operators also must include a section of coaxial cable of at least 4 feet in length between the switch terminal and the TV antenna lead wires in all switch installations they perform. This is to keep unshielded TV antenna twin-lead connections away from the cable termination.

A timetable was established for phasing out current marketing of A/B switches that do not conform to the new isolation specifications.

Cable operators are required to connect existing external TV antennas to the A/B selector switch and may not charge new subscribers a separate fee for switch installation. Cable operators may, however, charge for installation of antenna ground systems. The League had suggested that the FCC require the grounding of the TV antenna input when the switch is in the cable position.

Present cable rules (Section 76.601) provides that cable operators are responsible for detecting and eliminating leakage that would cause interference outside the cable subscriber's premises and/or would cause the cable system to exceed accepted leakage standards. (Rules are effective Jan. 28, 1988.)